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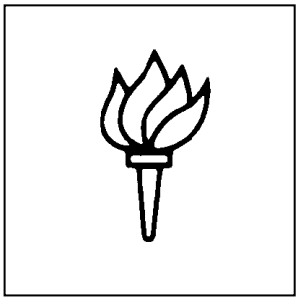

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Kimberly A. Clausing and Daniel Shaviro

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A Burden-Neutral Shift from Foreign Tax Creditability to Deductibility?

KIMBERLY CLAUSING* AND DANIEL SHAVIRO**

I. Introduction

As one of the authors has explained, analysis of the issues raised by foreign tax creditability often conflates two distinct margins affecting multinational firms.[1] The first is the marginal incentive to invest abroad, which depends on expected domestic tax burdens with respect to such investment. The domestic tax treatment of foreign tax liabilities is just one input into this marginal incentive, which also depends on U.S. tax rates for foreign source income and all other details of the foreign taxable income base. Nonetheless, a common rationale for the creditability of foreign tax payments is that, if they were merely deductible and all other U.S. tax rules for foreign income remained the same, the U.S. tax burden on foreign source income would be much greater (and, by most accounts, undesirably high).

A second and distinct margin concerns resident multinationals' cost-consciousness with respect to foreign tax liabilities. A foreign tax credit (FTC), where fully and immediately allowable, offers a marginal reimbursement rate (MRR) for foreign taxes of 100%, thus potentially making resident firms entirely indifferent to such liabilities.[2] From a unilateral home country perspective, however, foreign tax payments are no different than any other foreign business expense, since the revenues do not go to resident individuals. Thus, from a unilateral national welfare perspective, the optimal MRR is the same as that for all other expenses (or forgone gross income)—that is, the marginal tax rate. Mere deductibility for foreign taxes is therefore unilaterally op-

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[1] Daniel Shaviro, Rethinking Foreign Tax Creditability, 63 Nat'l Tax J. 709, 709-10 (2010) [hereinafter Rethinking]; Daniel Shaviro, The Case Against Foreign Tax Credits, 3 J. Legal Analysis 65, 66-68 (2011) [hereinafter The Case].

[2] In practice, effective MRRs often are less than 100%, due both to FTC rules, which limit the overall reimbursement amount to the precredit domestic tax liability on the foreign source income, and to deferral of subsidiaries' foreign source income, which generally postpones allowance of the credit until the related income becomes taxable in the residence country.

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timal at this margin, whereas creditability is substantially overgenerous.

To illustrate the incentive problem that results from foreign tax creditability, suppose a U.S. resident firm can choose between earning (1) $100 pre-foreign tax in a country that, like the United States, has a 35% corporate tax rate, or (2) $90 in a zero-tax jurisdiction. Ignoring deferral, U.S. individuals (including through tax revenues collected by the U.S. government) would reap only $65 from choice (1), as compared to $90 from choice (2) (multiplied, in each case, by their percentage ownership of the firm). Yet a credit system, unlike a deductibility system, would induce preferring choice (1), which would generate more profit ($65 instead of $58.50) after U.S. tax.

Of course, from a worldwide efficiency perspective, the $100 in pretax earnings is preferable. It is, however, rather peculiar to focus on worldwide efficiency when making national tax policies.[3] Our budget and tax priorities would undoubtedly look far different if consistently formulated using worldwide efficiency as a metric. While one can make a national welfare case for worldwide efficiency criteria on the basis of reciprocity, our FTC regime applies without conditionality.[4] Indeed, U.S. tax treaties uniformly permit our treaty partners to address potential double taxation through exemption, rather than requiring reciprocal foreign tax creditability.[5] Exemption is an implicit deductibility system in that, like express deductibility with a positive tax rate, it induces resident firms to rank their outbound investment choices based on the available after-foreign-tax expected returns. Therefore, even if expectations of reciprocity support acting cooperatively to address tax burdens on cross-border investment, they do not support raising the MRR on the view that others will respond by doing so as well.

Assuming a decision to invest abroad, foreign tax cost-consciousness matters for two distinct reasons. First, it induces companies that are deciding where to invest to focus on after-foreign-tax returns, rather than, as under a pure FTC system (without deferral or FTC limits), pre-foreign-tax returns. Second, it induces companies that are engaged in tax planning, given their underlying investment choices, to

[3] Michael J. Graetz, Taxing International Income: Inadequate Principles, Outdated Concepts, and Unsatisfactory Policies, The David R. Tillinghast Lecture (Oct. 26, 2000), in 54 Tax L. Rev. 261, 277–81 (2001); Shaviro, Rethinking, note 1, at 711; Shaviro, The Case, note 1, at 71-72.

[4] See IRC § 901(a) (allowing a credit without regard to reciprocity).

[5] See, e.g., Convention Between the United States of America and the Kingdom of the Netherlands for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with Respect to Taxes on Income, U.S.-Neth., Dec. 12, 1992, art. 25, Tax Treaties (CCH) ¶ 6103.27 (generally establishing exemption in the Netherlands and creditability in the United States).

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be willing to spend up to a dollar on tax planning that reduces their foreign tax liabilities by a dollar.[6] By contrast, in a pure FTC system firms in theory would be expected to spend zero on foreign tax minimization. Both of these incentive effects are desirable from a unilateral U.S. national welfare standpoint that equates foreign taxes with other foreign business expenses.

Once we accept that unilateral national welfare is the proper criterion to use when determining the MRR, the case for deductibility—that is, for the MRR to equal the marginal tax rate for foreign source income (whether zero or positive)—is straightforward. Again, nothing distinguishes foreign taxes from other foreign business expenses if we ignore the value of the revenue to people in the tax-collecting country. Yet this analysis gives us no information about tax policy at the first margin, concerning the overall incentive to invest abroad. Indeed, equality between the MRR and the marginal tax rate is compatible with a broad range of approaches at that margin, extending at least from national neutrality, under which all foreign source income is taxed at the full domestic rate, to exemption, under which the tax rate for such income is zero.

Thus, a potential case emerges for changing policy at the second margin, by replacing FTCs with mere deductions, no matter what policy one prefers at the first margin. Yet the case for making this shift carries no implication that the overall U.S. tax burden on foreign source income should otherwise change—such as by increasing, as would happen under current law if the FTC was replaced by a deduction but all other rules remained the same.[7] Indeed, given the conceptual distinctness of the two margins, it is useful to be able to describe paired credit and deductibility systems that, in the aggregate, are equivalent at the first margin. This exercise, in turn, raises two issues: (1) What sorts of adjustments should be used to establish this hypothetical equivalence? (2) How should equivalence be defined?

The first of these two questions is easier than the second. Since the overall tax burden on outbound investment by U.S. firms depends both on U.S. tax rates for foreign source income and on all other details of the foreign taxable income base, a burden-neutral shift to deductibility could be accomplished in a variety of different ways. For

[6] While spending on tax planning is not per se desirable, reducing foreign tax payments benefits the domestic economy since it results in more after-tax income upon repatriation.

[7] The case for national neutrality posits that foreign taxes should merely be deductible *and* that the tax rates for domestic and foreign source income should be the same, so that resident taxpayers will have an incentive to choose between such investments (if all is equal) based purely on expected after-foreign-tax returns. For unfavorable critiques of national neutrality, see, e.g., Graetz, note 3, at 286–93; James R. Hines, Reconsidering the Taxation of Foreign Source Income, 62 Tax L. Rev. 269 (2009). R

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example, at least in principle, one could narrow subpart F by just the right amount to offset precisely the effect on outbound tax burdens of replacing creditability with deductibility. Given, however, that any such tax base change would raise distinct issues regarding its own particular incentive effects, the cleanest way to create equivalence is through a lower tax rate for foreign source income under a given deductibility system than under the credit system with which it is being paired.

As for how to define the relevant equivalence, the right answer depends entirely on what one happens to want to hold constant. Thus, a number of different approaches are possible, including at least the following:

U.S. Revenue Equivalence. This would involve determining the tax rate for foreign source income, which when paired with a shift from foreign tax creditability to deductibility, would hold constant the present value of expected U.S. tax revenues, given all other rules (such as current U.S. tax law) and taking into account behavioral changes induced by the change in rules.

Outbound Investment Equivalence. Here the aim would be to hold constant aggregate foreign investment by U.S. companies, again taking into account behavioral changes.

Burden Equivalence. Here one would determine the tax rate at which, assuming constant behavior, U.S. companies' after-tax income from foreign investments would be the same as under current law, given the two assumed changes.[8]

Each of these approaches may be useful and informative. We apply the third, and call it a *burden-neutral shift to deductibility*, with "neutral" being defined relative to current law (or any baseline used to match a particular credit system with its deductibility equivalent at the first margin). Our rationale for using this approach here is that, while applying it is non-obvious and thus requires explication, it does not require inevitably uncertain and controversial empirical assumptions. Moreover, it is potentially of great normative interest (though the same might be true of the other two approaches). If one is uncertain about the optimal U.S. tax burden on foreign investment, but agrees that the optimal MRR for foreign taxes equals the marginal tax rate for the associated income, then this approach has the potential to be clearly national welfare-enhancing on the latter margin, while relatively uncontroversial on the former one.

[8] The assumption of constant behavior requires ignoring other relevant inputs to tax burdens that a shift to deductibility plus a lower tax rate presumably would change—for example, by either raising or lowering deadweight loss from the costs of international tax planning and compliance.

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The remainder of this Article proceeds as follows. Section II discusses the definition of a burden-neutral shift from creditability to deductibility. Section III examines empirical evidence concerning multinational firms' responsiveness to foreign tax MRRs. Section IV discusses further policy issues that are raised by burden-neutral deductibility. Section V offers a brief conclusion.

II. Defining a Burden-Neutral Shift to Foreign Tax Deductibility

Again, we define a burden-neutral shift from foreign tax creditability to deductibility as one in which, assuming constant behavior, after-tax income from foreign investments is the same under a deduction system as under the current system, due to a lower tax rate for foreign source income. We start by assuming that this is done for outbound investment in a particular country, but then consider how one might try to do this for outbound investment as a whole. In addition, we initially assume both that all income is repatriated immediately and that the home tax rate, t_{us}, exceeds the foreign tax rate, t_f. We subsequently relax both of these assumptions.

Against this background, consider a U.S. company, facing a domestic tax rate of 35% that invests in a country with a 10% rate. Under the current system but ignoring deferral, if the company earned $100 on the investment, it would owe $10 of tax to the source country and $25 (after applying the FTC) to the United States, leaving it with after-tax income of $65. Under a burden-neutral shift to foreign tax deductibility, it would deduct the $10 foreign tax liability from its U.S. income, leaving $90 of foreign source taxable income, and then pay U.S. tax on this income at the rate (as it happens, about 27.8%) that would leave it with the same $65 after tax as under current law.

More generally, let x equal income abroad. After-tax income would be given by:

$$x(1 - t_f) - x(t_{us} - t_f) = x(1 - t_{us})$$

To calculate the burden-neutral deduction rate on foreign income, designated t^*_{us}, we solve for the rate that would generate the same level of after-tax income.

$$x(1 - t_{us}) = x(1 - t_f)(1 - t^*_{us})$$

Canceling x and rearranging,

$$t^*_{us} = \frac{(t_{us} - t_f)}{(1 - t_f)}$$

The following table shows how the burden-neutral deduction tax rates on foreign income vary with the foreign tax rate, assuming a U.S. tax rate of 35%.

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TABLE 1
BURDEN-NEUTRAL DEDUCTION SYSTEM TAX RATES ON FOREIGN INCOME (ABSENT DEFERRAL)

Foreign Tax Rate (t_f) *(Percent)*	*Burden-Neutral Deduction Tax Rate on Foreign Income* (t^*_{us})*(Percent)*
0	35
5	31.6
10	27.8
15	23.5
20	18.8
25	13.3
30	7.1
35	0

As is apparent from the table, the burden-neutral rate falls as the foreign tax rate increases. As the foreign tax rate is higher, the FTC is more important to alleviate "excess" taxation on foreign income, so the burden-neutral foreign income tax rate must be subsequently lower to offset the absence of the FTC.

In cases where the foreign tax rate exceeds the U.S. tax rate, no residual U.S. tax would be due under the current system, and we instead would be defining the burden-neutral tax rate so that:

$x(1 - t_f) = x(1 - t_f)\ (1 - t^*_{us})$

This implies a burden-neutral deduction tax rate on foreign income of zero.

In the presence of deferral, the analysis generates the same burden-neutral deduction system tax rates. U.S. income tax is incurred only upon repatriation, so income grows abroad free of U.S. tax. FTCs grow as well to the extent that such income growth is taxed abroad. Upon repatriation, converting FTCs into deductions has the same relative impact on the taxpayer's U.S. liability, without regard to whether the credits at issue were from the initial period when income was earned abroad, or from the taxation of subsequent income growth. Burden neutrality requires the same degree of tax rate reduction for foreign source income with deferral as without it, and thus the same rates as those found in Table 1 generate burden neutrality.[9]

[9] While deferral does not change the burden-neutral deductibility rate, it does lower the MRR effectively provided by foreign tax creditability under existing law. For any dollar of foreign taxes paid, deferring allowance of the FTC reduces the present value of the $1 refund that the credit eventually provides.

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The above analysis assumes a distinct burden-neutral rate for income reported in each foreign country. Clearly, however, it would be extremely difficult to administer a tax system where the tax rate on foreign income varied based on the source country's tax rate. In addition, country-specific burden neutrality, while consistent with inducing taxpayers to engage in foreign tax planning given where they earn income, would undermine the efficiency goal (from a unilateral national welfare standpoint) of inducing income shifts from high-tax to low-tax countries where this would increase the post-foreign tax return. Thus, the argument for foreign tax deductibility suggests considering burden neutrality in the aggregate, rather than country by country. In this scenario, tax burdens generally would increase for U.S. companies that invest in high-tax countries, and decline for those that invest in low-tax countries, but remain constant for U.S. multinationals as a whole.

Thus, suppose one takes 20% to be the average foreign tax rate given where U.S. companies currently report income. This implies an overall burden-neutral deduction tax rate on foreign income of approximately 19%. Of course, different assumptions would yield different rates, and these can be calculated using the above formula.

Under a burden-neutral deductibility regime, as compared to the existing one, U.S. companies would have incentives to shift investment and reported income from high-tax to low-tax countries. This would result in lowering the average foreign tax rate that they pay abroad. The shift would thereby tend to make outbound investment by U.S. companies more profitable than under current law, implying the likelihood of an increase both in outbound investment by U.S. companies and in U.S. tax revenues with respect to foreign source income.

U.S. companies' average foreign tax rates likewise would be expected to decline if the deductibility rate were chosen with an eye to U.S. revenue equivalence or outbound investment equivalence. Thus, under a U.S. revenue-equivalent shift to foreign tax deductibility, U.S. companies' outbound investment and after-tax profitability presumably would be greater than under current law. And for the shift to be outbound investment-equivalent, presumably U.S. revenues would have to be higher than under current law, thus offsetting the reduction in foreign taxes. The main losers under all these scenarios would be relatively high-tax foreign countries, which would lose the benefit of the blunting effect of the U.S. FTC on companies' sensitivity to their tax rates.[10]

[10] For all these results, however, as we discuss in Section IV, other countries' policy responses to the U.S. shift could alter the ultimate result.

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We do not maintain that any one of these approaches is inherently superior to the others, since the aim of the this exercise is simply to prevent a possible change in U.S. firms' foreign tax sensitivity from automatically generating other changes that raise conceptually distinct policy issues. We argue only that all are worth considering if one accepts the view that deductibility creates the correct marginal incentive for U.S. firms with respect to foreign taxes. Under that view, the potential to increase one or more of U.S. tax revenue, U.S. companies' after-tax profitability, and U.S. companies' outbound investment, without requiring that any of them decline, may be considered appealing.

All of these approaches would have in common the core element of combining a shift from foreign tax creditability to deductibility with enactment of a compensating reduction (of some kind) in the tax rate for foreign source income. The urgency of adopting any of them, however, depends in part on the extent to which foreign tax MRRs under existing FTC systems are high enough (despite deferral and credit limits) to significantly reduce foreign tax cost-consciousness. Accordingly, we next consider empirical evidence on multinational firms' foreign tax sensitivity.

III. Consequences of the Foreign Tax Credit

As noted above, credit systems, including the current system of taxing U.S. multinational firms, result in firms being less sensitive to foreign tax rates than they would be under a deduction system (including an exemption system, which is equivalent to a deduction system with a zero tax rate on foreign income). Yet some argue that deferral and cross-crediting sufficiently blur the distinction between the credit and exemption systems to prevent their degrees of foreign tax responsiveness from differing significantly. Under the current U.S. system, it is likely that some firms (those without excess credits that repatriate immediately) have an MRR of 100%, while others (those with excess credits) face an MRR of zero despite having a positive tax rate on foreign source income. Still, one could reasonably speculate that in credit systems firms typically (in aggregate) face higher MRRs than under exemption. In this Part, we examine whether foreign tax rate sensitivity is lower among credit-country investors.

The prior literature is large, but it has not reached a consensus verdict. Some authors do not find evidence of tax rate responsiveness that varies between exemption and credit countries.[11] Yet some evi-

[11] See, e.g., Dana Hajkova, Giuseppe Nicoletti, Laura Vartia & Kwang-Yeol Yoo, Taxation and Business Environment as Drivers of Foreign Direct Investment in OECD Coun-

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dence indicates that tax system choices are consequential. Other authors show evidence of differences in tax responsiveness between credit and exemption countries.[12]

Ruud de Mooij and Sjef Ederveen have conducted meta-analyses of foreign direct investment (FDI) studies.[13] They examine the results of a large number of studies, investigating how the tax sensitivity of FDI depends on the characteristics of the study. Tax sensitivities are considered in terms of semi-elasticities, or how a percentage point change in the tax rate affects a percentage response in FDI. In the 2003 meta-analysis, they conclude that studies of exemption-country investors exhibit more tax responsiveness than credit-country analyses, although this outcome does not persist if one eliminates extreme findings.[14] The 2008 meta-analysis also finds that studies based on exemption countries (162 of the semi-elasticities) have higher elasticities than those based on credit countries (118 semi-elasticities).[15] The point estimate of the semi-elasticity difference between the two groups of studies is about 1.0.[16]

The following analysis seeks to improve understanding of the tax sensitivity of FDI under existing credit and exemption systems. While the empirical specification is standard, the analysis here benefits from far more comprehensive data than is typically employed, as well as more nuanced tax system coding. The data set includes thirty source

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tries, OECD Econ. Stud., June 2006, at 26-27; Joel Slemrod, Tax Effects on Foreign Direct Investment in the United States: Evidence from a Cross-Country Comparison, in Taxation in the Global Economy 79 (Assaf Razin & Joel Slemrod eds., 1990); Shang-Jin Wei, How Taxing Is Corruption on International Investors?, 82 Rev. Econ. & Stat. 1, 5-6 (2000); Agnès Bénassy-Quéré, Lionel Fontagné & Amina Lahrèche-Révil, Foreign Direct Investment and the Prospects for Tax Co-ordination in Europe 4 (Centre d'Etudes Prospectives et d'Informations Internationales, Working Paper No. 2000-06, 2000), available at http://www.cepii.fr/anglaisgraph/workpap/pdf/2000/wp00-06.pdf; Agnès Bénassy-Quéré, Lionel Fontagné & Amina Lahrèche-Révil, Tax Competition and Foreign Direct Investment 19-24 (Centre d'Etudes Prospectives et d'Informations Internationales, Working Paper No. 2003-17, 2003), available at http://www.cepii.fr/anglaisgraph/workpap/pdf/2003/wp03-17.pdf.

[12] See, e.g., James R. Hines, Jr., Altered States: Taxes and the Location of Foreign Direct Investment in America, 86 Am. Econ. Rev. 1076 (1996); Albert Wijeweera, Brian Dollery & Don Clark, Corporate Tax Rates and Foreign Direct Investment in the United States, 39 Applied Econ. 109 (2007); Reint Gropp & Kristina Kostial, The Disappearing Tax Base: Is Foreign Direct Investment Eroding Corporate Income Taxes? (Eur. Cent. Bank, Working Paper No. 31, 2000), available at http://www.ecb.int/pub/pdf/scpwps/ecbwp031.pdf.

[13] Ruud A. de Mooij & Sjef Ederveen, Corporate Tax Elasticities: A Reader's Guide to Empirical Findings, 24 Oxford Rev. Econ. Pol'y 680 (2008) [hereinafter Reader's Guide]; Ruud A. de Mooij & Sjef Ederveen, Taxation and Foreign Direct Investment: A Synthesis of Empirical Research, 10 Int'l Tax & Pub. Fin. 673 (2003) [hereinafter Synthesis].

[14] De Mooij & Ederveen, Synthesis, note 13, at 687. R

[15] De Mooij & Ederveen, Reader's Guide, note 13, at 692-93. R

[16] Id.

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countries investing in seventy-nine host countries over the period 1985 to 2007. Table 2 summarizes the main variables.

TABLE 2
SUMMARY STATISTICS

Variable	*Mean*	*Standard Deviation*
Bilateral FDI ($ million)	622	3,427
GDP ($ billion)	373	1,130
GDP per capita ($)	11,980	13,460
Distance between FDI Partners, in km	6,840	4,720
Statutory Tax Rate	.306	.106

The thirty source countries are the members of the OECD, and these countries are distinguished based on whether they have an exemption system, a credit system, or a hybrid system with features of both systems. Several countries that are classified as hybrid countries exempt some (but not all) types of foreign income. Tax treatment is based on the nature of bilateral tax treaties, whether the income is passive or active, or whether the tax rate or the tax system in the foreign country is sufficiently similar to the source country's tax rate or tax system. As such, the coding of this variable is at times ambiguous, so some specifications distinguish credit from other (exemption or hybrid) tax systems, and some specifications distinguish credit, hybrid, and exemption systems. A dummy variable indicates whether countries have controlled foreign corporation (CFC) laws, which are employed to counter profit-shifting by multinational firms. All the data sources are discussed in detail in the Data Appendix.

Figure 1 considers how the pattern of FDI outflows to low-, medium-, and high-tax countries varies with respect to the tax system of the investing country. Exemption countries have a higher share of their total FDI outflows destined for low-tax countries and a lower share of their total direct investment outflows destined for high-tax countries, in comparison to credit countries. The pattern for hybrid countries lies in between. Figure 1 provides a visual confirmation of the expectation that investors based in exemption countries will be more tax-sensitive than those in credit countries, although it is important to also control for other variables.

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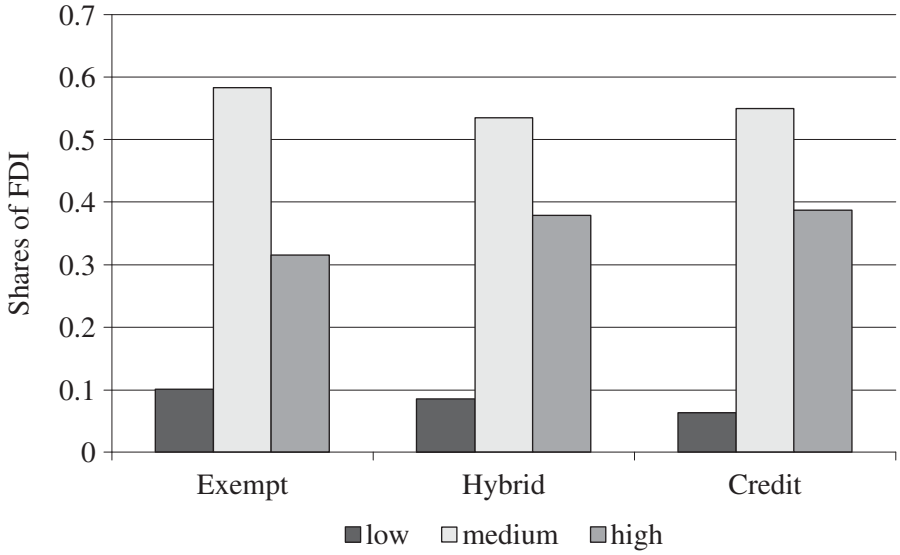
FIGURE 1
SHARE OF TOTAL FDI SENT TO LOW (15% OR LESS), MEDIUM (15-30%) AND HIGH (>30%) TAX COUNTRIES, BY TAX SYSTEM OF INVESTING COUNTRY



The regression analysis considers the following baseline specification, where *i* indicates source countries, *j* indicates receiving countries, and *t* indicates time.

$$\ln(FDI\text{ - }out)_{ijt} = \alpha + \beta_1 TaxRate_{it} + \beta_2 Tax\ Rate_{jt} + \beta_3 ExemptionSystem_{it} * Tax\ Rate_{jt} + \beta_4 HybridSystem_{it} * TaxRate_{jt} + \beta_5 CFCDummy_{it} + \beta_6 CFCdummy_{it} * TaxRate_{jt} + \beta_7 \ln(GDP_{it}) + \beta_8 \ln(GDPper\text{ - }capita_{it}) + \beta_9 \ln(GDP_{jt}) + \beta_{10} \ln(GDPper\text{ - }capita_{jt}) + \beta_{11} \ln(Distance_{ij}) + \upsilon_{ijt}$$

Variables are explicitly defined below.[17] It is expected that β_1 will be positive, as the tax rate of the source *Country i* will be positively related to foreign direct investment between *Countries i* and *j*.[18] Also β_2 is expected to be negative, as higher tax rates in the destination *Country j* will deter FDI between *Countries i* and *j*. If, however, *Country i* has an exemption system, it is hypothesized that investors

[17] Tax Rate is the statutory tax rate. Exemption system, hybrid system, and CFC Dummy are dummy variables defined to equal 1 if the country has an exemption system, a hybrid system, or a CFC law, respectively. GDP refers to gross domestic product, and GDP per capita refers to gross domestic product per capita. Distance refers to the distance between the two countries in kilometers. Data are discussed in more detail in the data appendix.

[18] This effect may be ambiguous, however, if low tax rates facilitate income-shifting away from high-tax foreign direct investment destinations. E.g., Michael Overesch, The Effects of Multinationals' Profit Shifting Activities on Real Investments, 62 Nat'l Tax J. 5 (2009) (finding some empirical support for this consideration).

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will be more responsive to the destination country tax rate, in comparison to credit countries. Therefore, β_3 is expected to be negative. Since credit countries are the implicit comparison group, β_4 should also be negative, although less so than β_3. In addition, β_5 and β_6 are included to control for the influence of CFC laws. If CFC laws reduce the potential for income-shifting, they may lower tax sensitivity, in which case the expected sign of β_6 is positive.

The analysis also includes important control variables. It is expected that β_7, β_8, and β_9 will be positive. Larger economies are expected both to send and receive more FDI, and richer economies are expected to send more FDI. The predicted sign of β_{10} is unclear; whether richer destination countries receive more FDI depends on whether the FDI is primarily intended to serve the local market (implying a positive effect of GDP per capita) or to employ inexpensive labor (implying a negative effect). It is expected that larger distances between countries will deter FDI flows, ceteris paribus, so β_{11} should be negative.

FTCs are expected to reduce the sensitivity of investors to foreign tax rates for multiple reasons. In the case of low-tax host countries, resulting profits are taxed in credit-system countries on repatriation, reducing the inducement of the low tax rate. In the case of high-tax host countries, firms from credit countries can offset some of the burden of the high tax rate due to the associated reduction in the domestic tax liability from the FTC. Also, firms may be able to use the tax credits generated from high-tax host country operations to offset taxes due in other countries, again lowering the disincentive associated with high rates of taxation.[19]

Table 3 shows results. Equation 1 is the baseline, estimated by ordinary least squares.[20] The tax rate of the home country is statistically significantly positive, and the tax rate of the destination country is negative and also statistically significant. For bilateral FDI flows originating in hybrid countries, there is a larger negative effect of host country taxation, as shown by the interaction term coefficient. For exemption countries, there is no statistically significant difference in tax responsiveness in comparison with credit countries, although the point estimate of this interaction term is negative and statistically significant with a lower (90%) confidence threshold. Somewhat surprisingly, the hybrid tax interaction term is larger than the exemption term.

[19] This point assumes that firms from credit countries do not already have excess FTC. If some firms have excess credits, then this effect is dampened.

[20] In the baseline specifications, negative FDI flows are included. For the negative observations, the natural log transformation is performed by taking the negative of the natural log of the absolute value of FDI.

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TABLE 3
BILATERAL FDI FLOWS BETWEEN OECD COUNTRIES AND 79 HOST COUNTRIES, 1985-2007

	1	2	3	4	5
Tax Rate, Home	2.174	2.447	2.409	2.081	2.943
	(0.401)**	(0.396)**	(0.398)**	(0.404)**	(0.410)**
Tax Rate, Host	-0.986	-1.024	-1.912	-1.26	-1.261
	(0.384)*	(0.384)**	(0.542)**	(0.590)*	(0.612)*
Exempt	-0.426				
* Host Tax Rate	(0.249)				
Hybrid	-1.427				
* Host Tax Rate	(0.245)**				
Exempt/Hybrid		-0.94	-0.827	-0.834	-0.659
*Host Tax Rate		(0.215)**	(0.219)**	(0.218)**	(0.282)*
CFC Law			-0.32	-0.324	-0.027
			(0.206)	(0.206)	(0.229)
CFC Law			1.451	1.493	0.595
*Host Tax Rate			(0.635)*	(0.633)*	(0.701)
ln(GDP),	0.663	0.69	0.671	0.699	0.579
Home	(0.026)**	(0.025)**	(0.028)**	(0.028)**	(0.035)**
ln(GDP p.c.),	0.767	0.752	0.742	0.789	0.746
Home	(0.060)**	(0.060)**	(0.060)**	(0.060)**	(0.069)**
ln(GPD),	0.594	0.588	0.59	0.562	0.549
Host	(0.021)**	(0.021)**	(0.021)**	(0.030)**	(0.027)**
ln(GDP P.C.),	-0.045	-0.048	-0.048	-0.065	-0.026
Host	(0.027)	(0.027)	(0.027)	(0.040)	(0.035)
lndis	-0.617	-0.626	-0.63	-0.748	-0.62
	(0.028)**	(0.028)**	(0.028)**	(0.034)**	(0.038)**
Observations	16013	16013	16013	16013	16013
No. receiving dummies				77	
No. pair dummies					1466
R-squared	0.13	0.13	0.13		

Dependent variables are in natural log form. Standard errors in parentheses.
* (**) indicates statistical significance at 5% (1%).

In general, control variables have their expected signs: Larger and richer source country economies are associated with larger FDI outflows, and larger destination country economies also receive more FDI. More distant countries have fewer FDI flows between them, and there is not a statistically significant effect of destination country GDP per capita.

In Column 2, the exemption and hybrid countries are combined into one group—noncredit countries. As discussed above, the classification of noncredit countries into exemption and hybrid categories is imperfect, so this specification considers both groups as equally distinct from credit countries. Destination country tax rates have a negative influence on FDI outflows originating in both credit and

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noncredit system OECD countries, although the negative effects of host country taxation are larger for noncredit-system-country investors.

Column 3 includes a dummy variable for the presence of CFC laws and an interaction term to capture the effect of CFC laws on the tax sensitivity of FDI. While the CFC dummy coefficient is statistically indistinguishable from zero, the interaction term is statistically positive, implying a lower tax sensitivity for countries with CFC laws. This result is intuitively plausible. Since income-shifting to low-tax countries is more difficult in the presence of CFC laws, these laws should lower the tax sensitivity of FDI accordingly. These results imply that, on average, credit countries with CFC laws will exhibit the lowest tax sensitivity to destination country tax rates, and exemption countries without CFC laws will exhibit the highest sensitivity to destination country tax rates.

Columns 4 and 5 include fixed effects for receiving countries and country pairs. Thus, Column 4 generates the tax effect estimates based on variation in host country tax rates over time *within* destination countries, rather than on cross-country variation in destination country tax rates. Column 5 goes further, emphasizing time variation in tax rates among given country pairs, allowing each country pair a distinct fixed effect. Of note, most key results are unchanged although the CFC interaction term becomes statistically insignificant in Column 5.

To check the robustness of the results, we considered specifications that employed effective tax rates instead of statutory tax rates. The general pattern of results is similar.[21] We also considered time-specific fixed effects, and the pattern of results was again similar.

The results from Table 3 all indicate a clear pattern of lower tax sensitivity for credit countries, in comparison with noncredit countries. This supports the expectation that credit systems should lower foreign tax sensitivity due to higher MRRs. To be sure, the division between credit and exemption system countries is far from pure in practice. Credit countries have deferral and FTC limits that may lower the MRR below 100% in many cases. Still, one generally would expect higher MRRs for credit-country investors than for exemption-country investors, and the results from Table 3 indicate that these higher MRRs are associated with lower foreign tax sensitivity.

[21] Results are available upon request.

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IV. Policy Considerations

As emphasized above, analysis of FTCs often conflates their effects at two distinct margins: (1) the incentive to invest abroad and (2) resident firms' sensitivity to foreign tax liabilities. If one agrees that deductibility, rather than creditability, of foreign taxes gives domestic firms the right incentive at the second margin, but is concerned about the effect at the first margin if countries with worldwide systems (such as the United States) replace credits with deductions while otherwise keeping their rules the same, there is a possible solution. One can simply lower the tax rate applied to foreign source income. At least in principle, a rate could be selected that would result in holding constant, in the aggregate, the tax burden on outbound investment (ignoring behavioral responses, which could cause such burden to decline).[22] Alternatively, one could choose a rate that, in combination with the switch from creditability to deductibility, would hold constant overall domestic tax revenues or the overall amount of outbound investment.

Would such a change be good policy? The fact that one can hold the first margin constant in the aggregate, while improving incentives at the second margin, is certainly encouraging, and leads to the possibility that such results could increase both U.S. tax revenues and U.S. companies' after-tax profitability. Admittedly, however, the issues may be more complicated. Problems of political economy and treaty compliance may weigh against a burden-neutral shift to deductibility.[23] Thus, rather than arguing for such a shift, one of the authors concludes that the case for deductibility lends support to the argument for exemption, on the ground that, in practice, it may be the only (or most) feasible deductibility system.[24]

Here, without attempting to canvas comprehensively the issues potentially raised by implementing a burden-neutral shift to deductibility, we briefly review four issues that may be especially pertinent: (1) effects on commonly-invoked worldwide welfare criteria for assessing international tax policy; (2) effects on U.S. government revenues; (3) the interaction of the proposal with the distortions associated with deferral; and (4) the effect on the importance in U.S. tax law of source determinations for U.S. multinationals' income.

Burden-Neutral Deductibility and Worldwide Welfare. For U.S. companies that have currently-taxable foreign source income and do not have excess credits, U.S. adoption of the shift would increase incentives to shift investment (as well as reported taxable income) from high-tax to low-tax countries. This, of course, is exactly what the pro-

[22] See Part II.

[23] Shaviro, The Case, note 1, at 94-96.

[24] Id.

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posal is meant to do, reflecting its motivation in terms of unilateral national welfare. Nonetheless, some possible consequences from the standpoint of worldwide welfare are worth noting, because they may be considered normatively relevant.

General equilibrium models of corporate taxation since Arnold Harberger's work[25] suggest that tax differences across countries cause capital to flow from high-tax to low-tax jurisdictions, increasing the marginal product of labor (and thus wages) in low-tax countries, while decreasing the marginal product of labor (and thus wages) in high-tax countries.[26] This misallocation of capital lowers worldwide efficiency, as tax considerations alter the investment choices that would have been made based on pretax profitability.

Worldwide residence-based taxation, without deferral and with unlimited FTCs, causes taxpayers that are subject to it to rank investment opportunities based on pretax profitability, given that the home country tax rate will end up applying no matter where they invest. Such taxation, if sufficiently widespread, therefore can potentially reduce net capital migration from high-tax to low-tax countries by reason of the tax differences.

By eliminating the FTC as part of a burden-neutral shift to deductibility, the United States effectively would have abandoned its effort to reduce these net capital shifts via the credit's blunting effect on U.S. taxpayers' foreign tax cost-consciousness. The shift also would increase U.S. multinationals' incentive to book their foreign taxable income in low-tax rather than high-tax countries, thereby potentially increasing the payoff to global tax planning. Proponents of basing U.S. international tax policy at least partly on worldwide rather than purely national welfare considerations may reasonably regard this as a bad thing.

Still, the extent to which the shift in U.S. tax policy would actually affect the global allocation of capital is not entirely clear. For example, clientele effects are possible, with U.S. firms simply taking a greater ownership share of corporate assets in low-tax, rather than high-tax countries, than they would have under a continued FTC regime. More generally, if corporations are mere intermediaries in capi-

[25] Arnold C. Harberger, The ABCs of Corporation Tax Incidence: Insights into the Open-Economy Case, in Tax Policy and Economic Growth 51 (Am. Council Capital Formation ed., 1995).

[26] E.g., Jane G. Gravelle & Kent A. Smetters, Does the Open Economy Assumption Really Mean that Labor Bears the Burden of a Capital Income Tax?, 6 Advances Econ. Analysis & Pol'y, at 3 (2006), http://www.bepress.com/cgi/viewcontent.cgi?article=1548&context=bejeap; William C. Randolph, International Burdens of the Corporate Income Tax 43-47 (Cong. Budget Office, Working Paper No. 2006-09, 2006), http://www.cbo.gov/ftpdocs/75xx/doc7503/2006-09.pdf.

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tal markets in which investors throughout the world participate, international variations in tax rates could affect the ownership of assets, reducing the tax effects on overall levels of investment across countries.[27] To the extent that such clientele effects dominate, the global efficiency costs associated with a lower capital stock in high-tax countries may be partially offset.

Burden-Neutral Deductibility and U.S. Government Revenues. As noted above, a burden-neutral shift to deductibility, coupled with a reduction in the tax rate on foreign income, might be expected to increase U.S. government revenues by making U.S. resident firms more tax sensitive. U.S. firms would have a tax incentive to shift investment and taxable income toward low-tax countries and away from high-tax countries, leaving more after-(foreign)-tax income to be repatriated eventually to the United States. Still, several possible long-term dynamic factors should be kept in mind. First, the United States is a high-tax country relative to most countries. To the extent that other foreign countries with FTC systems responded by implementing burden-neutral shifts to deductibility, this could adversely affect U.S. government revenues, due to greater foreign tax sensitivity to U.S. corporate tax rates.

Second, one of the authors has demonstrated that tax-motivated income shifting by multinational firms is already costing the U.S. Treasury tens of billions of dollars annually.[28] It is not clear that increasing income-shifting incentives is unproblematic; with even more investment and income in low-tax countries, this would likely create further opportunities for income-shifting away from the U.S. tax base. Finally, if the shift to deductibility was achieved via a move to an exemption system, rather than one that is burden-neutral, that would likely also result in lower U.S. government revenues. Clausing indicates that credit countries typically receive more corporate tax revenue than exemption countries, controlling for other factors.[29] Thus, while exemption is a form of deduction system (with a tax rate of zero on foreign income), and thus would lower MRRs to their correct level,

[27] E.g., Mihir A. Desai & Dhammika Dharmapala, Taxes, Institutions and Foreign Diversification Opportunities, 93 J. Pub. Econ. 703 (2009) (finding some evidence of substitution between foreign portfolio investment and FDI in response to tax incentives).

[28] Kimberly A. Clausing, Multinational Firm Tax Avoidance and Tax Policy, 62 Nat'l Tax J. 703, 711-13 (2009).

[29] Kimberly A. Clausing, Closer Economic Integration and Corporate Tax Systems, Global Econ. J., Mar. 2008, at 1; Kimberly A. Clausing, Corporate Tax Revenues in OECD Countries, 14 Int'l Tax & Pub. Fin. 115 (2007).

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it should be kept in mind that an exemption system would likely reduce revenues.[30]

Interaction Between Foreign Tax Credits and Deferral. While this Article has emphasized the efficiency costs (from a unilateral national welfare standpoint) associated with offering FTCs,[31] there also are substantial inefficiencies associated with deferral.[32] For example, the threat of paying a repatriation tax may both affect companies' investment decisions and motivate costly planning efforts to gain access to foreign subsidiaries' funds without triggering the tax.

One peculiar feature of both deferral and allowing a FTC is that each may potentially reduce the distortions associated with the other.[33] For example, a U.S. company can repatriate its foreign subsidiaries' profits without generating any domestic tax liability insofar as it has sufficient credits. Likewise, insofar as a U.S. company plans to take advantage of deferral indefinitely or even permanently, the value of its prospective FTCs may decline or even disappear, and it increasingly bears the cost of the foreign taxes it pays.

Thus, proposals to address either distortion may potentially worsen the other. This critique may apply to enacting a burden-neutral shift to deductibility, given that U.S. companies would no longer be able repatriate foreign earnings tax-free, even if earned in a high-tax country. One possible solution would be to take the burden-neutral idea a step further, by enacting burden-neutral repeal of both FTCs and deferral.[34]

Need for Source Determinations in U.S. Tax Law. Expressly applying a lower tax rate to U.S. companies' foreign source income than to their domestic income would require source determinations to be made in all cases, and it would substantially increase the tax incentive to shift income from the domestic tax base to the foreign tax base. Under current law, by contrast, the source of U.S. companies' taxable income generally does not matter for U.S. tax purposes unless they are potentially excess-credit. Increasing the substantive importance of

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30 This assessment is based on historical experience. Still, an exemption system could be designed that would raise revenues; as is frequently the case, the outcome depends on the details.

31 See Shaviro, The Case, note 1; Shaviro, Rethinking, note 1.

32 For discussion, see Mihir A. Desai, C. Fritz Foley & James R. Hines, Jr., Repatriation Taxes and Dividend Distortions, 54 Nat'l Tax J. 829 (2001); Harry Grubert & Rosanne Altshuler, Corporate Taxes in the World Economy: Reforming the Taxation of Cross-Border Income, in Fundamental Tax Reform: Issues, Choices, and Implications 319 (John W. Diamond & George R. Zodrow eds., 2008).

33 See Shaviro, The Case, note 1, at 46-47.

34 Grubert and Altshuler propose burden-neutral repeal of deferral, although they would apply the reduced rate to all corporate income, not just foreign source income. Grubert & Altshuler, note 32, at 345-49. R

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source determinations could lead to increased tax planning, compliance, and administrative costs, even if tax burdens on outbound investment otherwise remained the same.

While using FTCs, rather than a lower explicit rate, to lower tax burdens on outbound investment therefore has an area of advantage, one should not exaggerate the significance of this advantage. After all, the FTC rules in U.S. tax law involve their own very substantial complexity, in part reflecting the need to limit the availability of a 100% MRR.[35] Moreover, if one accepts that foreign taxes are not relevantly different than any other foreign business expense, singling them out (rather than something else) for uniquely favorable treatment seems arbitrary, and is hard to rationalize if considered purely as a device for minimizing the need for source determinations.

V. Conclusion

As one of the authors recently demonstrated,[36] cogent analysis of foreign tax creditability requires distinguishing between its effects on (1) marginal incentives to invest abroad and (2) resident taxpayers' cost-consciousness with respect to foreign tax liabilities. At margin (2), foreign tax deductibility, rather than creditability, gives taxpayers the optimal incentive, from a unilateral national welfare standpoint, to trade off foreign tax liabilities against other cash flows. While replacing FTCs with deductions would greatly increase tax burdens on outbound investment if all other domestic tax rules for foreign source income remained the same, this effect can be offset by reducing the domestic tax rate for such income, thus permitting incentives to be improved at (2) while those at (1) remained in aggregate about the same.

This Article makes three main contributions to the analysis of FTCs in light of these two distinct margins. First, it examines how a burden-neutral approach (at margin (1)) to shifting from foreign tax creditability to deductibility might be defined and implemented. We define a burden-neutral shift as one in which, assuming constant behavior, after-tax income from foreign investments would be the same under a deduction system as the pre-existing credit system, due to a reduction in the tax rate for foreign source income. To illustrate, if, for U.S. companies' foreign source income, the average foreign tax rate is 20%, then the burden-neutral deduction tax rate on foreign income is approximately 19%. While it is not difficult to achieve exact burden neutrality in a shift from FTCs to deductions, the broad contours of

[35] Shaviro, The Case, note 1, at 82.
[36] Id.; Shaviro, Rethinking, note 1.

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such a policy are of interest as a possible guide to implementation of the reform.

Second, the Article offers new evidence comparing foreign tax sensitivity for FDI under existing credit as opposed to exemption systems. While a pure credit system (without credit limits or deferral) would offer resident firms an MRR of 100% for their foreign tax liabilities, thus eliminating all incentives for cost-consciousness at this margin, actual MRRs in credit countries can be as low as zero for excess-credit taxpayers and those planning permanent reinvestment abroad. The prior literature has reached no consensus verdict regarding relative foreign tax sensitivity in existing credit and exemption systems.[37] Using a comprehensive data set and more nuanced coding of systems with mixed features, we find a clear pattern of lower foreign tax sensitivity for credit countries, in comparison to exemption and hybrid countries. This finding suggests that eliminating FTCs would likely affect behavior.

Third, we briefly examine several of the main policy issues that adoption of burden-neutral deductibility would raise. In particular, we note the ambiguity of its likely worldwide welfare effects (although it is motivated by unilateral national welfare considerations), its likely positive and negative revenue effects, the tradeoff between distortions caused by the FTC and by deferral, and the significance of its increasing the importance of source determinations.

This Article does not purport to settle whether burden-neutral deductibility ought to be adopted. Still, the proposal's capacity to improve incentives with regard to foreign tax cost-consciousness, while keeping those related to outbound investment about the same, suggests that it merits thorough consideration. Perhaps more important, however, is the promotion of wider awareness of the fundamental incentive problem resulting from creditability. The evidence in this Article suggests creditability may have a significant impact on behavior, despite rules limiting the frequency with which credit countries actually offer a 100% MRR for foreign tax payments.

[37] See notes 11-12 and accompanying text. **R**

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Data Appendix

Prior studies often classify countries as either credit or exemption countries, yet even with the more refined classification here, substantial ambiguities remain. For example, the French system, which is classified here as an exemption system, also includes controlled foreign company rules (effective from 2006) that stipulate that income earned by a French firm through a foreign firm may be taxed in France if such income is subject to an effective tax rate that is less the 50% the French effective tax rate on similar income.[38] For Germany, also classified as a territorial country, corporations are subject to German tax on worldwide income; yet tax treaties provide an exemption from German taxation for income from foreign permanent establishments.[39] Due to these ambiguities, specifications were tried that simply distinguished credit countries from other countries, grouping together hybrid and exemption countries.

Statutory tax rate data are from various sources.[40] Data on effective tax rates are calculated from the taxes paid by U.S. multinational foreign affiliates relative to their net (before tax) income; these data are from the U.S. Bureau of Economic Analysis, which conducts annual surveys of U.S. multinational firms.[41] Data on CFC laws are from Voget.[42]

Data on FDI are from the OECD, which provides measures of outward FDI flows from all OECD countries to a large number of receiving countries, including the seventy-nine countries included in this analysis.[43] Data on GDP and GDP per capita come from the World Bank's World Development Indicators Database,[44] and data on geographic distances between countries are taken from the website of Kristian Skrede Gleditsch at the University of Essex.[45]

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[38] See Ernst & Young, Worldwide Corporate Tax Guide 260-61 (2007).

[39] Id. at 293.

[40] PricewaterhouseCoopers' Corporate Taxes: Worldwide Summaries; Ernst & Young, note 38; Deloitte Touche Tohmatsu Limited, Deloitte International Tax Source, http://www.dits.deloitte.com (last visited Apr. 1, 2011) (containing matrixes of country tax rates from recent history). R

[41] See data available at http://www.bea.gov/international/ai1.htm#usdia.

[42] Johannes Voget, Relocation of Headquarters and International Taxation, J. Pub. Econ. (forthcoming 2011).

[43] Organisation for Economic Co-operation and Development, see http://stats.oecd.org/Index.

[44] The World Bank, World Development Indicators, http://data.worldbank.org/data-catalog/world-development-indicators (last visited Apr. 1, 2011).

[45] Kristian Skrede Gleditsch, Distance Between Capital Cities, http://privatewww.essex.ac.uk/~ksg/data-5.html (last visited Apr. 1, 2011).

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